

REMARKS

Amendments

Claims 1 and 17 have been amended without prejudice to recite preferred embodiments of applicants' invention that are more clearly distinguished from the prior art. Support is provided on page 34, line 6 to page 35, line 2. Claim 1 now incorporates the limitations recited in claim 14 and consequently claim 14 is hereby cancelled.

Claim 13 have been amended to correct informalities. Claim 18 is withdrawn following an election made November 16, 2005.

Current Invention

The invention relates to a mild, tear free shampoo composition that provides excellent in-use properties and conditioning benefits. The composition is especially suitable for use by children and teenagers. Based on extensive experimentation applicants have discovered that combinations of alky ethoxy (≥ 3 EO) sulfates, betaines, and hydroxysultones at specific ratios provide the exceptional mildness required for low potential for ocular irritation as measured using well established in-vitro tests predictive of eye irritation. Surprisingly these compositions do not compromise lathering and hair conditioning properties and have excellent economy in use.

Statement of Common Ownership

At the time the invention was made in the present application, Serial No. 10/764,114, the inventors were employees of and under obligation to assign the rights to the invention to Unilever Home and Personal Care USA, a division of Conopco, Inc a corporation of the state of New York having its principle place of business at 325 North Wells, Chicago, Illinois 60610 which also at the time of the invention owned US Patent Application 2003/0022799 A1 (Alvarado et al).

A copy of the abstract of the recorded assignment of US Patent Application 2003/0022799 A1 on file with the Office is enclosed.

Claims Objection

Claim 13 has been amended as suggested by the Examiner to correct informalities.

Claims Rejection 35 USC §103

In the Office Action mailed January 18, 2006, claims 1-4, 6-10 and 14-16 were rejected under 35 USC § 103(a) as being unpatentable over Patel et al (US 6,165,454).

Patel et al is directed to a low energy method for making stabilized hair care products comprising an anionic deterative surfactant, a water insoluble silicone and acrylic stabilizing agent wherein the method does not require added heat.

The Office asserts that it would have been obvious for a person of ordinary skill in the art to have selected from the various optional and alternative ingredients mentioned in Patel et al and to have combined them in the correct proportions so as to have arrived at applicants' claimed invention. The Office further asserts that the broad teachings of Patel et al would suggest compositions having the same Zein solubility, permeability and wet combing force properties as recited in the instant claims. Applicants' respectfully disagree.

Nowhere in Patel et al is there the slightest suggestion that the specific combinations and proportions recited in applicants' claims would have had any benefits

or advantages over the plethora of alternative and optional ingredients recited let alone have the very low eye irritation potential discovered by applicants.

Furthermore, Patel et al is completely silent about the problem of eye irritation. The words "eye", "ocular", "irritation", "zein", "permeability", or "tear-free" are not even mentioned in the reference. Patel et al is also silent about any type of test or criteria for assessing mildness in general and eye irritation in particular.

Even still more remote from the teachings of Patel is a composition which exhibits very low eye irritancy and excellent hair conditioning properties as evidenced by a low wet combing force. These benefits arise in applicants' invention both because of the types of ingredients used and the careful selection of the proportions of these ingredients as shown by the examples.

To demonstrate the criticality of the ingredients and ratios recited in claim 1 to the potential irritancy of the composition, applicants respectfully draw the Examiners attention to the accompanying declaration dated April 17, 2006 from Cinda Carlson one of the inventors. The declaration summarizes recent zein solubility experiments carried out with examples disclosed in art cited by the Office. As discussed by applicants, zein solubility is a convenient in-vitro measure of the mildness of surfactant compositions.

Specifically, Table 2 provides the % zein solubilized by the compositions corresponding to Examples 33, 44, 55, and 73 taught by Patel et al. The Patel et al examples were selected for comparison because these are believed to be the mildest compositions disclosed by Patel et al. The results show that all the Patel compositions have zein solubility much greater than 1% (1.63% - 3.27%) and are expected to be eye irritants. In contrast, the zein solubility of a representative composition of the present invention as in example 5, (see Table 4 of the specification on page 45) is much lower (0.96% in Table 4) and thus provides much lower potential for ocular irritancy as confirmed by applicants in the more sensitive fluorescein leakage assay.

Finally, Patel et al states in the summary at column 2 line 40 that the ingredients are combined "to form a solution containing a mild, aqueous, foaming and conditioning, detergent composition.....". Thus a person of ordinary skill in the art would have reasonably been dissuaded from even questioning whether milder compositions could have been selected because the compositions were already considered mild by Patel et al and there is no mention of a need to select still milder compositions to achieve for example a lower potential for eye irritation. Consequently, applicants maintain that their findings are far from being obvious based on the teachings of Patel et al and are in fact surprising.

In light of the above amendments and remarks, applicants respectfully request that the 103(a) rejection over Patel et al be reconsidered and withdrawn.

Claims 1-4, 6-9, 11-12, and 14-16 were rejected under 35 USC § 103(a) as being unpatentable over Alvarado et al (US 2003/0022799). In view of the above statement of *Common Ownership*, applicants respectfully requests that Alvarado et al be disqualified under 35 USC §103(c) as a prior art reference.

Claims 1-4, 6-10 and 13-16 were rejected under 35 USC § 103(a) as being unpatentable over Baravetto et al (US 6,174,522).

Baravetto et al is directed to aqueous conditioning shampoos containing conditioning agents having a dual particle size range, suspending agent and a deposition polymer.

The Office asserts that it would have been obvious for a person of ordinary skill in the art to have selected from the various alternative and optional ingredients mentioned in Baravetto et al and to have combined them in the correct proportions so as to have arrived at applicants' claimed invention. The Office further asserts that the broad teachings of Baravetto et al would have suggested compositions having the same

Zein solubility, permeability and wet combing force properties as recited in the instant claims. Applicants' respectfully disagree.

Nowhere in Baravetto et al is there the slightest suggestion that the specific combinations recited in applicants' claims would have had any benefits or advantages over the plethora of optional and alternative ingredients disclosed let alone to have the very low eye irritation potential discovered by applicants.

Further, Baravetto et al is completely silent about the problem of eye irritation. The words "eye", "ocular", "irritation", "zein", "permeability", or "tear-free" are not even mentioned in the patent. Baravetto et al is also silent about any type of test or criteria for assessing mildness in general and eye irritation in particular.

Even still more remote from the teachings of Baravetto et al is a composition which exhibits very low eye irritancy potential and excellent hair conditioning properties as evidenced by a low wet combing force. These benefits arise in applicants' invention both because of the types of ingredients used and the careful selection of the proportions of these ingredients as shown by the examples.

Exemplary compositions disclosed in Baravetto et al were also evaluated in Zein solubilization. The Examiners attention is again respectfully drawn to Tables 1 and 2 of the accompanying declaration.

Specifically, Table 2 provides the % zein solubilized by the compositions corresponding to Examples VI and X of Baravetto et al which were selected for comparison because these compositions are believed to be the mildest compositions disclosed by Baravetto et al. The results show that all the Baravetto et al compositions have zein solubility much greater than 1% (1.91% - 2.07%) and are expected to be eye irritants in contrast to the compositions of the current invention.

Furthermore, Baravetto et al states at column 24, lines 10-14 that “the compositions of the Examples can provide excellent in-use hair cleaning, lather, mildness,” Thus, a person of ordinary skill in the art would not have been motivated to explore milder compositions nor would the artisan have had any reasonable expectation of finding such improved compositions because Baravetto et al expressly states that the exemplary compositions already have excellent mildness. Applicants submit that far from being obvious, the invention is in fact surprising over Baravetto

In light of the above remarks, applicants respectfully request that the 103(a) rejection over Baravetto et al be reconsidered and withdrawn.

Claims 1-10 and 13-16 were rejected under 35 USC § 103(a) as being unpatentable over Fairley et al (US 2002/0192180). The Office asserts that it would have been obvious for a person of ordinary skill in the art to have selected from the various optional and alternative ingredients mentioned in Fairley et al and to have combined them in the correct ratios so as to have arrived at applicants’ claimed invention. Applicants’ respectfully disagree.

Fairley et al is directed to an aqueous conditioning shampoo composition that comprises a dispersed non-volatile, water-insoluble, oily conditioning agent having a particle size in a specified range.

Nowhere in Fairley et al is there the slightest suggestion that the specific combinations recited in applicants’ claims would have had any benefits or advantages over the plethora of alternative and optional ingredients recited let alone have had the very low eye irritation potential discovered by applicants.

Further, Fairley et al is completely silent about the issues of mildness or eye irritation. In fact the words “mild”, “mildness”, “eye”, “ocular”, “irritation”, “zein”, “permeability”, or “tear-free” are not mentioned in the reference. Fairley et al is also

silent about any type of test or criteria for assessing mildness in general and eye irritation in particular.

Even still more remote from the teachings of Fairley et al is a composition which exhibits very low eye irritancy potential and excellent hair conditioning properties as evidenced by a low wet combing force. These benefits arise in applicants' invention both because of the types of ingredients used and the careful selection of the proportions of these ingredients as shown by the examples.

The zein solubility of the sole exemplary composition disclosed in Fairley et al was also determined. The Examiners attention is again respectfully drawn to Tables 1 and 2 of the accompanying declaration.

Specifically, Table 2 provides the % zein solubilized by the composition corresponding to Example 1 of Fairley et al. The results show that the exemplary Fairley et al composition has a zein solubility of 3.11% and is expected to be a significant eye irritant in contrast with the current inventive compositions.

Applicants respectfully submit that a person of ordinary skill in the art would not have been motivated to modify the compositions of Fairley et al so as to achieve a level of mildness such as is targeted by applicants because Fairley et al is completely silent about mildness, provides no direction by which this property can be altered and discloses no tests to assess its magnitude.

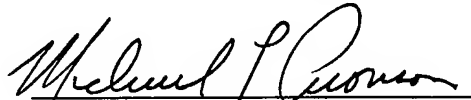
In light of the above arguments, applicants respectfully request that the 103(a) rejection over Fairley et al be reconsidered and withdrawn.

To summarize, because one can in principle pick and choose ingredients from a list of alternative and optional materials recited in a reference so as to have arrived at a claimed invention is no reason to do so. Motivation to modify must be found within the four corners of the reference and not be based on the benefits of hindsight.

Neither Patel et al, Baravetto et al, nor Fairley et al would have provided motivation to a person of ordinary skill in the art to have selected the specific mixtures recited in applicants' claims from among the many optional and alternative materials disclosed in these references. Nor do these references discuss the problem of eye irritation, provide any tests or criteria to assess it. In fact the references disclose exemplary compositions which are purported to be mild but as the accompanying declaration has shown have significant potential to be irritating to eyes.

Consequently, applicants respectfully submit that neither Patel et al, Baravetto et al, or Fairley et al, alone or in combination supports a prima facie case of obviousness as required under 103(a) and respectfully request the application be allowed to issue.

Respectfully submitted,


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Patent Assignment Abstract of Title**Total Assignments: 1****Application #:** 09916133**Filing Dt:** 07/27/2001**Patent #:** NONE**Issue Dt:****PCT #:** NONE**Publication #:** US20030022799**Pub Dt:** 01/30/2003**Inventors:** Robert M. Alvarado, Richard A. Abbott, Chaitanya Umedbhai Patel**Title:** A SHAMPOO FOAMING COMPOSITION WHICH COMPRISES AN ALKYL ETHER SULFATE, A SORBITAN DERIVATIVE, A BETAINE, AN ALKYLAMIDO ALKYLAMINE, AN ALKOXYLATED CARBOXYLIC ACID, AND AN ORGANIC SALT**Assignment: 1****Reel/Frame:** 012236 / 0212**Received:** 10/15/2001**Recorded:** 09/28/2001**Mailed:** 12/17/2001**Pages:** 4**Conveyance:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).**Assignors:** ALVARADO, ROBERT M.**Exec Dt:** 07/26/2001

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